# SOURCE REGIONS OF THE SLOW SOLAR WIND

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Decades of exploring the three-dimensional inner heliosphere by direct spacecraft measurements have shown that the solar wind can be grouped roughly into low and high-speed flows with distinctly different plasma properties, implying different coronal origins. While the fast wind comes from coronal holes, the slow wind is known only to be associated with the highly structured and highly variable streamer belt, a more precise identification of its source not being possible because of the lack of direct measurements inside 0.3 AU.

White-light measurements show that with increasing heliocentric distance coronal streamers taper to narrow extensions or stalks of angular size 1-2° (measured from Sun center) by a few solar radii. Comprising fine-scale filamentary structures that are strikingly pronounced when compared with the rest of the quiescent solar wind, these narrow streamer stalks appear as conspicuous enhancements in radio propagation measurements that detect density fluctuations, such as intensity scintillation. Thus, not only do intensity scintillation measurements pinpoint streamer stalks, they also provide solar wind velocity estimates for them.

There is growing evidence that the slow wind emanates from localized sources in the corona overlying the streamer belt. In this paper, we show that simultaneous estimates of density fluctuations and solar wind velocity deduced from S- and X-band intensity scintillation measurements conducted by Voyager 2 during its 1982 superior conjunction support the notion that streamer stalks are these sources.